

Title (en)
PASSIVE ELECTRODE BLANKETING IN A FUEL CELL

Title (de)
PASSIVELEKTRODEN-BLANKETING IN EINER BRENNSTOFFZELLE

Title (fr)
INTÉGRATION D'ÉLECTRODE PASSIVE DANS UNE PILE À COMBUSTIBLE

Publication
EP 1987556 A1 20081105 (EN)

Application
EP 07710606 A 20070208

Priority
• CA 2007000189 W 20070208
• US 77101806 P 20060208

Abstract (en)
[origin: WO2007090284A1] A number of factors cause undesirable reactions to occur that increases the rate of wear and degradation experienced by fuel cell components during shut down operations and restarting periods To mitigate concerns associated with the aforementioned, the present application is directed at an improved fuel cell module comprising i) a fuel cell stack including at least one fuel cell, each fuel cell including an anode electrode, a cathode electrode and an electrolyte medium arranged between the anode electrode and the cathode electrode, wherein during normal operation the anode electrode is provided with a first reactant and the cathode electrode is provided with a first mixture containing a second reactant and a non-reactive agent, 11) a parasitic load that connectable across the anode and the cathode electrodes, 111) a first reactant supply port, fluidly connectable to the anode electrode, for supplying the first reactant to the anode electrode, iv) a side stream fluidly connectable to the first reactant supply and the anode electrode, v) a reactant reservoir, fluidly connectable to the side stream, for storing an amount of the first reactant suitable for a shutdown process of the fuel cell module, whereby, in use when the fuel cell module is shutdown, the stored amount of the first reactant is drawn from the reactant reservoir and electrochemically reacts with the second reactant in the fuel cell module, to electrochemically consume the first and second reactants, thereby leaving a second mixture that substantially comprises the non-reactive agent, vi) and a pressure generating device, fluidly connectable to the side stream and positioned upstream of the reactant reservoir, for pressurizing and delivering the first reactant from the first reactant supply to the reactant reservoir.

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Citation (search report)
See references of WO 2007090284A1

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